GENERAL DYNAMICS
Mission Systems

RAMPART™ 10 Slot Rugged 3U VPX Chassis

Secure, Configurable CMOSS Mounted Form Factor (CMFF) Solution

CMOSS, SOSA™, OpenVPX™, and SAVE Aligned

100G FP / 25G UTP High Speed Backplane

MIL-STD-810 Ruggedized

VITA 46.11 Tier 3 Chassis Manager

Designed for Multi-Domain Security Certification

Supports Ground Mobile and Aviation Platforms

Front-loading Card Cage for Field Maintainability

Overview

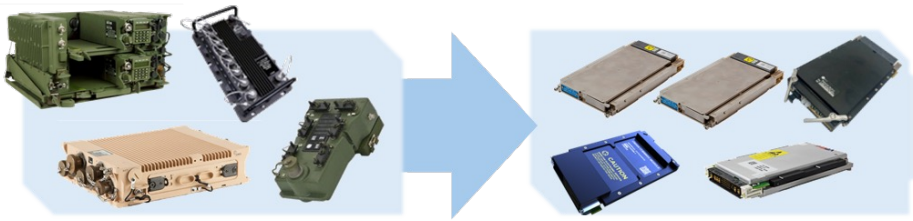
The GDMS Rampart™ family of chassis is designed to enable the vision of a standards-based C5ISR ecosystem promoting system upgradability, modularity, reduced SWAP, improved logistics, and rapid capability evolution.

Supported by the broad availability of 3U OpenVPX™ payload capabilities, the Rampart™ chassis can support a wide range of mission configurations including Edge Computing, Networking, Communications, EW/ELINT, and beyond. The modular, upgradable nature of 3U OpenVPX™ and standards-based architecture enable rapid system reconfiguration.

SCALABLE: Providing 10 total 3U VPX module slots in a single Standard A-Kit Vehicle Envelope (SAVE) profile, the Rampart™ chassis maximizes the amount of C5ISR capability that can be delivered in SWAP constrained platforms. The chassis and mounting tray can be directly installed in the footprint of existing vehicle radio systems and use standards- based interfaces for broad platform compatibility.

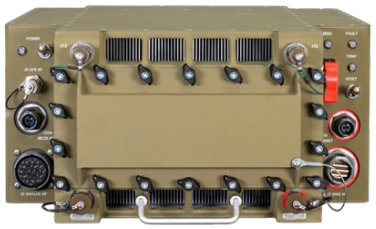
SURVIVABLE: The chassis is designed to meet the rigorous Ground Mobile and Aviation requirements set forth in the Mounted Mission Command Environmental and Quality Specification (MMC EQC). Includes operation in +71C ambient conditions, immersion and wash down conditions, multiple 810G vibration and shock profiles, MIL-STD-461 EMI, and MIL-STD-1275 / MIL-STD-704 power environments.

SECURE: The Rampart™ chassis features complete physical and electrical separation between two enclaves, including a contiguous isolation boundary across the backplane. These provisions ensure the chassis is positioned to support applications requiring security certification. The chassis supports operation as single, dual, or multi-domain system depending on switch slot population and configuration.



Legacy C5ISR Capabilities

Modular C5ISR payloads



Scalable C5ISR using GDMS Rampart™ CMFF Chassis

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Standards Alignment

- CMFF – CMOSS Mounted Form Factor v1.0
- CMOSS – CMOSS Interoperability Requirements Spec v1.2
- SAVE – Standard A-Kit Vehicle Envelope v1.0
- SOSA – Sensor Open Systems Architecture v2.0 SNAP 3
- VICTORY – Vehicle Integration for C4ISR/EW Interop. v1.9
- MORA - Modular Open Radio Frequency Architecture v

Backplane

- 100G Ethernet Data Plane (Fat Pipe (FP))
- 25G Ethernet Control Plane (Ultra Thin Pipe (UTP))
- PCIE Gen4 Expansion Plane
- 1PPS AUX_CLK and 100MHZ REF_CLK
- Routing aligned to the CMFF Reference Architecture (RA)
- Mezzanine VITA 46.11 Tier 3 Chassis Manager

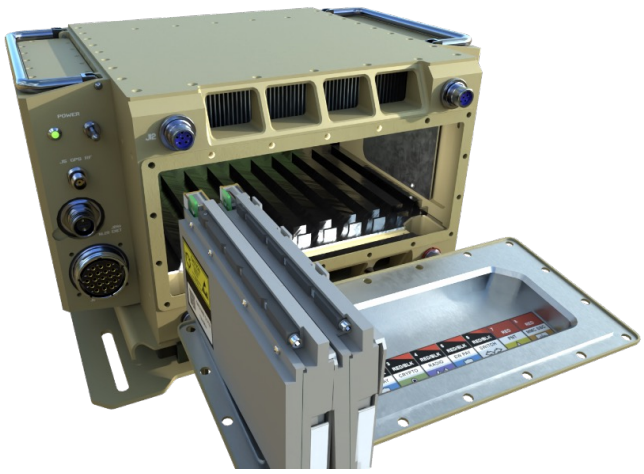
Slot Profile Support

10 Total VITA 48.2 Conduction Cooled Slots, comprised of:

- 2 x VITA62 SOSA PSU
- 5 x SOSA SLT3-PAY-1F1U1S1S1U1U2F1H-14.6.11-4
- 1 x SOSA SLT3-PAY-1F1F2U1TU1T1U1T-14.2.16
- 1 x SOSA SLT3x-TIM-2S1U22S1U2U1H-14.9.2-1
- 1 x SOSA SLT3-SWH-6F1U7U-14.4.14

Designed for Maintainability

- Front payload card cage and maintenance interfaces enable access while installed in platform SAVE locations
- Externally removable and serviceable holdup battery
- Intuitive payload labeling and locating scheme



Physical Specifications

- 15.88” x 16.1” x 7.85” (W x D x H) standalone
- 15.88” x 16.1” x 9.23” (W x D x H) with tray
- Weight 42.8lbs standalone, 50.9lbs with tray
- Fits in a single SAVE mounting location
- Bolt pattern compatible with MT-6352 SINCGARS tray
- Forced air-over-conduction cooling design is completely sealed from the card cage and electronics assemblies

Electrical Specifications

- 20V – 36V DC Input Range, continuous
- MIL-STD-1275F, including all transients and IES / CES*
- MIL-STD-704F, including all transients and 50ms hold-up*
- MIL-STD-461G (contact for specific support)
- Supports up to 600W total input power
- Operable with 1 or 2 (redundant) VITA 62 supplies
- VBAT via 2600mAh or external SOSA J16 input

Environmental Specifications

- Operating Temp. (cont) -25C to +54C, 810G Method 501 PII
- Operating Temp. (peak) -46C to +71C, 810G Method 501 PII
- Storage Temp -51C to -71C, 810G Method 501 PI
- Functional Shock 40G 6ms, 810G Method 516.6 PI
- Tracked Vibration TOPI-2-601A, D-35, D-36, D-37
- Wheeled Vibration 810G Method 514 PI Category 4
- Dripping Rain 810G Method 506 PIII
- Blowing Sand 810G Method 510.5 PII
- Blowing Dust 810G Method 510.5 PI
- Water Jet Cleaning ATPD-2404 5.2.7
- Immersion 810G Method 512 PI
- Salt Fog 810G Method 509 PI
- Operating Humidity 95% NC, 810G Method 507 PII
- Inquire for additional specifications

Ordering Information	
Chasis Assembly	US00298582-1
Mounting Tray (tracking)	US00295697-001
Mounting Tray (wheeled)	US00295697-002
Integration & Test Cable Set	US00298596-1
Replacement Battery	US00289526

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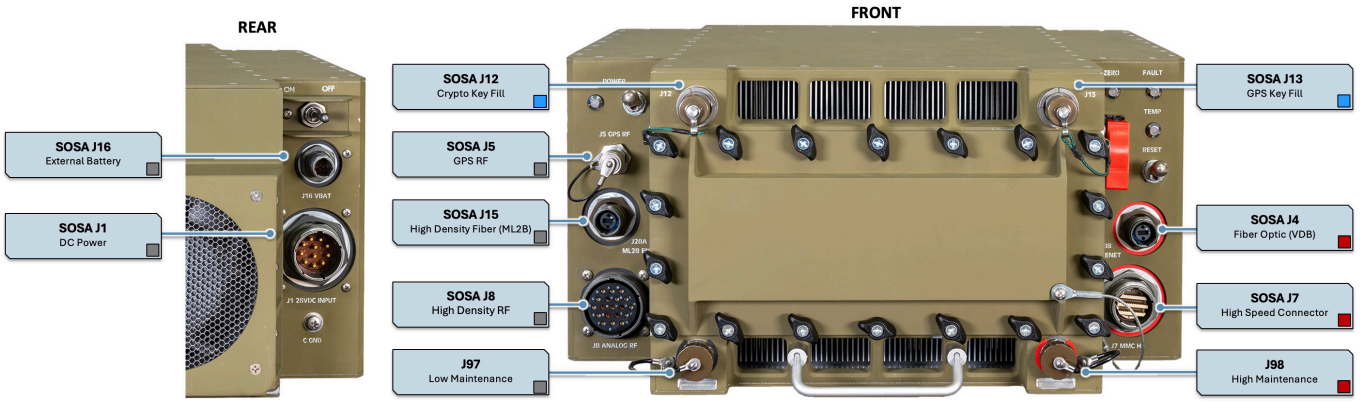
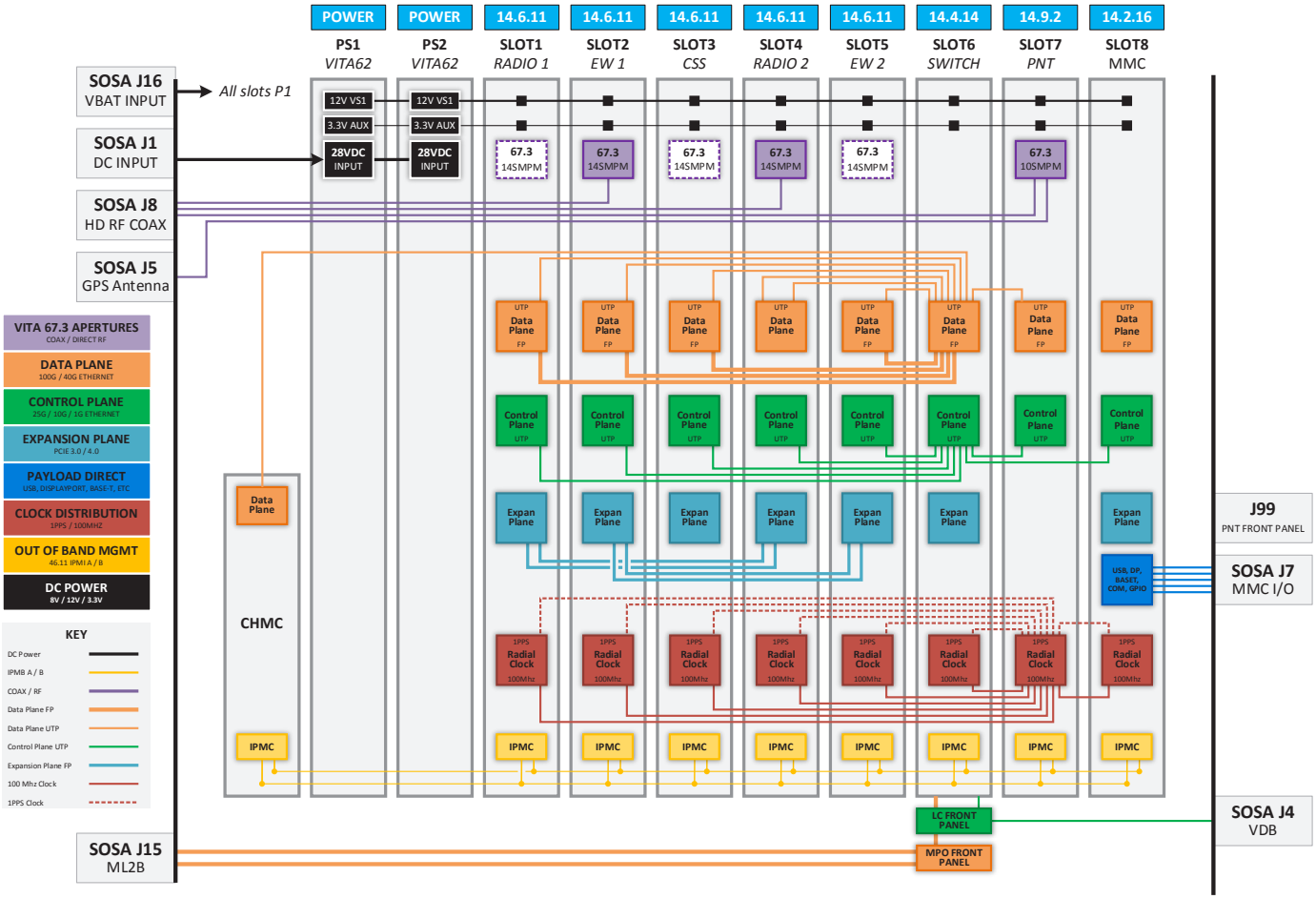
External Connection Detail



Backplane Header Detail



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